

App. Serial No. 10/509,564
Docket No.: NL020287 US

In the Claims:

This listing of claims replaces all prior versions.

1. *(Currently Amended)* A method of manufacturing nanowires, comprising the steps of providing a patterned etching mask at a surface of a semiconductor substrate, and etching the semiconductor substrate so as to form nanowires in a direction substantially perpendicular to the surface of the semiconductor substrate, characterized in that
the semiconductor substrate comprises a first layer of a first material, ~~and a second layer of a second material, which layers adjoin one another~~ and a third layer of the first material, the second layer sandwiched between the first and third layers; and etching takes place through the first, ~~and the second~~ and third layers for forming the nanowires such that the nanowires comprise a first region of the first material, ~~and a second region of the second material~~ and a third region of the first material.
2. *(Original)* A method as claimed in claim 1, characterized in that the first and the second material comprise the same semiconductor but different dopings.
3. *(Original)* A method as claimed in claim 1, characterized in that the second layer is formed by epitaxial growth of the second material on the first layer.
4. *(Original)* A method as claimed in claim 3, characterized in that the first material comprises Si, and the second material is chosen from the group comprising SiC, SiGe, and SiGeC.
5. *(Currently Amended)* A method as claimed in claim 1, characterized in that ~~a third layer of a third material is present in the semiconductor substrate,~~
~~the second layer lies sandwiched between the first layer and the third layer and~~
~~has a thickness of at most 100 nm, and~~
~~etching takes place through the first, the second, and the third layer for forming the nanowires, such that the nanowires comprise the first region, the second region, and a third region composed of the third material.~~

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6. *(Canceled)*

7. *(Previously Presented)* A method as claimed in claim 1, wherein the nanowires are removed from the substrate after the etching of the substrate.

8. *(Canceled)*.

9. *(Canceled)*.